record and playback selector **985**. The user selection being indicative of the recording mode. The record and playback selector **985** sends a first mode signal to the electronic processor **180** when the user selects the recording mode (step **1035**). The user then selects a FORWARD direction, a REVERSE direction, or NEUTRAL using the direction switch **210**. The direction switch **210** sends a direction signal to the electronic processor **180**. The electronic processor **180** then operates the motor **170** according to the trigger activation and records the desired motor parameter as described above (step **1040**). In the embodiment of FIG. **25**, the recording session starts as soon as the power tool **100** enters the recording mode. When the user wishes to end the recording session and exit the recording mode, the user selects the playback mode using the record and playback selector **985**. The electronic processor **180** receives the user selection indicative of the playback mode through the record and playback selector **985** (step **1045**). The record and playback selector **985** sends a second mode signal to the electronic processor **180** when the user selects the playback mode (step **1050**). Once the electronic processor **180** determines that the power tool **100** is in the playback mode (step **1053**), the electronic processor **180** controls the motor **170** according to the recorded motor parameter (step **1055**). Once the recording mode ends (i.e., in response to actuation of the record and playback selector **985**), the wireless communication controller **330** transmits the recorded motor parameter to the external device **300** for storage (step **1060**). In such embodiments, the user can select when the recording mode is established and when the recording mode ends to allow playback of the recorded motor parameter.

[0099] When the wireless communication controller **330** transmits the recorded motor parameter signal **720** to the external device **300**, the external device **300** stores the recorded motor operation (e.g., the recorded motor parameter signal **720**) as a new mode profile and can assign the mode profile to one of the modes as described with respect to FIG. **21**.

[0100] FIG. **26** illustrates a cordless, hand-held impact wrench **1100** including the mode pad **270**. The impact wrench **1100** includes an upper main body **1104**, a handle portion **1108**, a battery pack receiving portion **1112**, the mode pad **270**, an output drive device or mechanism **1116**, a forward/reverse selection button **210**, a trigger **205**, and air vents **1128**. The impact wrench **1100** also includes a worklight **1132**. The battery pack receiving portion **1112** receives a slide-on battery pack (not shown). The outer portions or housing of the impact wrench **1100** (e.g., the main body **1104** and the handle portion **1108**) are composed of a durable and light-weight plastic material. The drive mechanism **1116** is composed of a metal (e.g., steel) as is known in the art.

[0101] As shown in FIG. **27**, the power tool **1100** includes the mode pad **270**. The mode pad **270** is a user interface on the foot **1147** of the power tool **100**. The mode pad **270** includes a mode selection switch **275** and mode indicator LEDs block **1180** having mode indicators **1185***a-e*. Each mode indicator **1185***a-e* includes one of the LEDs **337***a-e* (see FIG. **6**) and an associated one of indicating symbols **1195***a-e* (e.g., "1", "2", "3", "4", and a radio wave symbol). When an LED **337** is enabled, the associated indicating symbol **1195** is illuminated. For instance, when LED **337***a* is enabled, the "1" (indicating symbol **1195***a*) is illuminated.

[0102] In the illustrated embodiment, the power tool **1100** has five selectable modes (one, two, three, for, and adaptive), each associated with a different one of the mode indicators **1185***a-e*. the mode selection switch **275** is a pushbutton that cycles through the five selectable modes upon each press (e.g., mode 1, 2, 3, 4, 5, 1, 2, and so on). The adaptive mode is represented by the indicating symbol **1195***e* (the radio wave symbol). In the adaptive mode, the user is able to configure the power tool **1100** via an external device **300**, as is described above. In other embodiments, the power tool **1100** has more or fewer modes, and the mode selection switch **275** may be a different type of switch such as, for example, a slide switch and/or a rotary switch.

[0103] One of skill in the art will recognize that embodiments of the invention may be incorporated into tools such as power drills, impact drivers, power saws, angle drivers, and other tools incorporating a user-activated trigger mechanism. One skilled in the art will also recognize that the trigger activation signals, while illustrated as being discrete steps, are merely examples and that other continuous types of trigger activation signals are contemplated herein.

[0104] Thus, the invention provides, among other things, a power tool configured to enter a recording mode via an external device, record a motor parameter, and transmit the recorded motor parameter to the external device. Various features and advantages of the invention are set forth in the following claims.

What is claimed is:

1. A method of operating power tools, the method comprising:

receiving, at a first electronic processor of a first power tool, a command to start a recording mode;

receiving, at the first electronic processor, a measured parameter from a sensor of the first power tool while a first motor of the first power tool is operating;

generating a recorded motor parameter by recording, on a first memory of the first power tool, the measured parameter when the first power tool operates in the recording mode;

transmitting, via a first transceiver of the first power tool, the recorded motor parameter;

receiving, at an external device, the recorded motor parameter;

transmitting, via the external device, the recorded motor parameter to a second power tool; and

receiving, via a second transceiver of the second power tool, the recorded motor parameter.

2. The method of claim **1**, further comprising:

associating, at the second power tool, the recorded motor parameter with a selectable mode of the second power tool.

3. The method of claim **2**, further comprising

receiving, at a second electronic processor of the second power tool, a selection of a first mode of operation of the second power tool via a mode profile button; and

controlling, via the second electronic processor, a second motor of the second power tool to operate according to the recorded motor parameter when the second power tool operates in the first mode of operation.

4. The method of claim **1**, further comprising:

sending, via a device transceiver of the external device, the recorded motor parameter to a remote server;

receiving, via the device transceiver of the external device, the recorded motor parameter from the remote